

**EDITORIAL****SKILLS AND COMPETENCES IN MARITIME LOGISTICS: MANAGERIAL AND ORGANIZATIONAL EMERGING ISSUES FOR HUMAN RESOURCES**

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**The Role of Skills and Competences in the Maritime Logistics Industry**

Personnel is traditionally recognized as one of the key drivers affecting service firms' success (Grönroos, 1982; 2000). From a managerial perspective, human resources (HRs) largely contribute to the overall quality of the service provided, thus impacting the value created and distributed to clients (Armstrong et al., 2014). Furthermore, personnel costs have been proven to significantly affect service firms' costs structure, although their relevance on total costs differ across various sub-sectors (Lashley, 2001; Satta et al., 2011).

The central role of HRs in business models and competitive strategy of service firms is also demonstrated by the diffusion of various conceptual models in marketing management, starting from Norman (1984) to the 8Ps Lovelock and Wirtz's model (Lovelock and Wirtz, 2004). Indeed, personnel and their competences become one of the critical points in managing service firms, both on the individual side and on the organizational and strategical sides (Torre, 2005).

When it comes to the maritime logistics industry, the key role of human resources is confirmed (Parola & Satta, 2012). In this regard, some special challenges in managing HRs emerge, due to organizational complexities as well as difficulties in preserving high quality service standards. These, in turn, are combined with the unique characteristics of the sector, such as, in particular, its capital-intensive nature.

Despite the progressive shift towards the capital-intensive paradigm, the human factor is still considered as one of most valuable assets in both shipping and ports. Crew management and port labor deployment practices (e.g., dockers, crane drivers and harbor pilots) are expected to heavily affect the success of shipping companies and terminal operators, respectively, as the management of HRs is demonstrated to impact the quality, reliability and flexibility of shipping and port services (Notteboom, 2010).

Although some studies have investigated the major drivers shaping the causal nexus between HR management and firms' competitiveness in maritime logistics, the literature is fragmented and exploratory, and several research gaps can be identified.

In particular, the evolutionary patterns of hard and soft skills developed in the industry as well as the cross-fertilization opportunities between them are rather neglected by scholars in both managerial and organizational studies.

Hard skills are technical competences related to specific occupations and tasks; as a result, they can be easily defined and measured. Hard skills can be defined as those achievements included on a résumé, such as education, work experience, knowledge,

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and levels of expertise. Soft skills, instead, are the intangible, non-technical, personality-specific competences that complement technical competences and strongly affect organizational behavior, helping a worker to become a leader, facilitator, mediator and negotiator (Robles, 2012, Laker & Powell, 2011). Unlike hard skills, soft skills are applicable to all types of activities and, for this reason, they are defined as “transversal”, and can represent a driving force for workers who want to reconvert their work experience in a perspective of flexibility.

### **Rationale for this special issue**

This special issue takes its origins from the Project “Second Life - Seafarers work and live better having alternatives of a future job ashore”, commissioned by The ITF Seafarers' Trust (London, UK) conducted under the scientific coordination of the Italian Center of Excellence for Logistics, Transport and Infrastructures (CIELI, University of Genoa, Italy). The research, which was carried out in 2018, tries to fill the gap mentioned earlier by addressing the career opportunities of former seafarers within the maritime cluster industry and focusing on the role of skills and competences. The salient outcomes of the project have been presented during an international workshop held in Genoa in January 2019. Some of the presented scientific contributions lie at the basis of many of the papers included in this special issue.

The research project aims at identifying the prospect of a satisfactory job ashore at the end of the career as seafarer, when the worker abandons seagoing before the retirement age. Such on-shore job perspective, indeed, emerges as a key driver for the decision to undertake this carrier. Empirical evidence suggests that seafarers show a higher labour productivity and conduct a more satisfactory life, also from a personal viewpoint, when they hold in mind viable alternative job opportunities ashore, after leaving their position in maritime enterprises (Thai, Balasubramanyam, Yeoh, & Norsofiana, 2013). With evidence, this is particularly true when a new good position ashore is available due to skills and competences developed during the seafarer's professional career (BIMCO, 2015).

Despite the practical relevance of this theme to the industry, prior studies have neglected this specific topic and consequently a systematic body of knowledge on ex-seafarers' professional opportunities ashore is missing. A deeper understanding of these labour market features would enable to bridge this gap and to reduce current barriers that affect the match between supply and demand. Such an understanding is valuable to several players, including shipping companies, manning agencies, maritime and port workers, etc.

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The six contributions included in this special issue cover a large spectrum of the various dimensions underlying the chosen topic. More precisely, the selected manuscripts aim to scrutinize the demand and supply sides of the maritime labour

market and to pave the way for advancing the academic and practical knowledge on the hard and soft skills held by (former) seafarers, enabling them to gain valuable alternative professional opportunities ashore. The special volume also includes contributions dealing with other professions in the maritime logistics industry, such as port/dock work.

The first contribution, titled “The Italian Seafarers’ labour market: Assessing the demand-supply equilibrium”, by Gian Enzo Duci, Lorenzo Galante and Enrico Musso investigates the current status of the seafarers’ labour market. The study focuses on the Italian case, trying to assess the balance between supply and demand. This market, despite the maritime tradition of the country, is currently experiencing a dramatic shortage of seafarer candidates, mostly due to the lack of vocation for this job carrier among the younger generations. In particular, the study estimates the size of the demand and the supply of workforce in the Italian market, grounding on both theoretical models and empirical data from the industry.

The analysis of the Italian seafarer’s market has been rather neglected in extant academic literature, although a wide understanding of the phenomenon could provide the supply side with additional motivated manpower reducing the imbalances of both officers and ratings. The study not only estimates the effective misbalance between supply and demand but also provides some original insights on how to overcome the main constraints currently affecting this labour market. The Authors demonstrate that seafarers will tend to increase their commitment and their productivity on board if they are aware of job opportunities ashore according to their prior professional experiences after years of work at sea.

The paper identifies several mainstream data sources for scrutinizing the size of the market as well as for better understanding various professional profiles and related skills. In addition, the Authors recommend to build a suitable tool for matching onboard and ashore professional profiles, grounding on both skills and competences which characterize various job positions. The development and implementation of a software tool capable of combining the skills required by maritime and logistics firms with those held by seafarers is argued to benefit the Italian seafarers’ market, in line with the “on board skills & competences – professional profiles ashore” matrix developed within the aforementioned “Second Life” Project commissioned by The ITF Seafarers Trust to the CIELI.

The second paper, co-authored by Teresina Torre, Marta Giannoni and Giovanni Colzi, proposes an in-depth analysis on “Investigating seafarers’ hard and soft skills in maritime logistics: an overarching approach”. It provides an overview of seafarers’ hard and soft skills and introduces an ad-hoc framework for disentangling main issues related to competences in the shipping industry. The suggested theoretical model is used for identifying those skills developed onboard that are expected to support ex-seafarers when searching satisfactory job positions ashore.

The paper provides both robust theoretical underpinnings for addressing the role of hard and soft skills, grounding on organizational theories, and also proposes an original conceptual framework to evaluate how seafarers can achieve a “second life” ashore. In particular, it identifies two critical drivers currently pushing seafarers

towards a career ashore. First, the rapid changes in competences and skills demanded by the maritime labour market, which increasingly requires specific technical skills and tends to cut jobs in favour of higher automation. Second, the severe working conditions and poor life expectancy at sea. Hence, the skills acquired and developed during their former seagoing experiences are recognized to be essential for paving the way for a new professional life ashore.

Consequently, the Authors identify specific professional profiles ashore within the maritime cluster, which allows seafarers to exploit skills developed within their prior seagoing experience. Several professional profiles sought after by port-related transport and logistics companies are discussed and debated. This new perspective offers interesting insights for future avenues, in order to develop different training forms and support the creation of appropriate skills assessments.

The third contribution, titled “Competences, skills and career expectations: insight from the Italian seafarers’ labour market” is co-authored by Francesco Parola, Giovanni Satta, Luca Persico and Francesco Vitellaro.

The paper uses well-established managerial theories such as the resource-based view (RBV), the knowledge-based view (KBV) and internal marketing for addressing the role of skills and competences in shaping personnel job expectations and corporate commitment, therefore contributing to boosting firm’s competitive performance. Both academic studies and empirical analyses have demonstrated that the managerial approach used by a firm to manage its workforce affects its performance.

Nonetheless, the shipping labour market is characterized by a broad array of professional positions and related skills which makes it more complex to investigate the causal nexuses between skills, career expectations and personnel contribution to the development of a sustainable competitive advantage for shipping companies. In addition, the advent of emerging technologies and labour reforms have resulted in rapid changes in market requirements, pushing shipping companies to increasingly invest in education and training for their employees. Against this background, the Authors argue that a deeper understanding of hard and soft skills can support training courses and programmes and help to optimise HR management in the shipping industry.

The manuscript maps the main onboard professional profiles for each ship department and related hard/soft skills. Then, the paper provides an evaluation of seafarers’ competences and investigates the main barriers perceived by seafarers for their career path as well as the negative implications observed on their performance.

For the aim of the study, 116 onboard professional profiles belonging to the three ship departments (i.e., 12 for deck, 13 for engine and 91 for hotellerie) are mapped and evaluated and an ad-hoc structured questionnaire is administered to a broad sample of Italian Seafarers involved in all the main shipping departments.

The empirical findings provide an in-depth overview of the Italian Seafarers’ labour market, shedding light on their skills and competences, future career expectations ashore and critical concerns related to these issues. The research

outcomes support both shipping companies in the management of human resources as well as policy makers when modelling public and private employment services.

Innovation and technological developments such as the digital transformation and automation in the shipping and port business, can have wide ramifications on workers and human resources managers. Two contributions in this issue deal with the implications of these emerging cutting-edge trends on maritime logistics workers.

In particular, the fourth paper on “The impact of innovation on dock labour: evidence from European ports” and authored by Theo Notteboom and Francesco Vitellaro, addresses the impact of innovations on port and maritime-related labour. The manuscript recognizes that the market environment of ports and terminals is continuously pushing terminal operators to achieve higher levels of dock labour performance. In this perspective, the paper proposes an original conceptual framework to identify, classify and evaluate innovative initiatives of terminal operators addressed to enhance port labour performance and meet the ever more stringent market requirements.

The manuscript contributes to existing dock labour literature by linking the innovation concept to a market-driven perspective on the organization of dock work in light of changing market requirements. The study does not only consider technological innovations, but also includes organisational and regulatory innovation in the proposed theoretical approach to evaluate the potential impact on labour performance.

The findings show that innovative initiatives can have very different characteristics and ramifications when looking at the type of innovation, the boundaries of innovation, the nature of the actors involved, the (expected) magnitude of impact and the impact of labour performance in terms of labour productivity, cost efficiency and quality of labour. In line with the purpose of the SECOND LIFE project, the results suggest innovation offers new valuable opportunities for both dockworkers and seafarers who are willing to improve their skills and competences.

In a similar vein, the fifth contribution, titled “Port labour in the era of automation and digitalization. What’s next?” and co-authored by George Vaggelas and Camille Leotta, investigates current and future challenges for port labour in the light of the main trends shaping the port competitive environment. In this perspective, the evolution of port labour is argued to be driven by technology-related factors, i.e., digitalization and automation.

The paper discusses the implications of these technology-driven trends in port labour, in line with its two research goals. The first objective is to identify the implications of digitalization trends on port labour, whereas the second is to analyse the implications of automation on port labour.

Port operators are investing in new technologies, tools and methods for increasing productivity and competitiveness, but these strategies display their positive effect only when developed jointly with investments in training and education for boosting corporate knowledge. In the era of digitalization and port automation, in fact, the



development of innovative hard and soft skills is fundamental for enhancing productivity and efficiency of port labour.

In this context, potential advantages (i.e., increasing port efficiency, increasing port responsiveness to port users' needs, robotization etc.) and disadvantages (i.e. loss of low-skilled jobs, increasing initial investment cost, yard requirement, shortage of specialised technical personnel etc.) affecting port labour are critically assessed, both for the automation and digitalization processes.

Finally, the last paper on "Governance and safety solutions in maritime industry: The case of 'Costa Concordia cruise liner'", by Marzia Ventura, Umberto La Torre and Rocco Reina, aims to analyze and understand the role of HR management in the maritime sector. The Authors follow a blended approach with a specific focus on crew management activities.

They investigate the case of the "Costa Concordia" disaster, which unveils the breakdown of the "Chain of command" and the non-compliance with the Safety Rota. The Costa Concordia disaster provides a valuable opportunity to understand how deficiencies in coordination and organizational behavior significantly influence service quality and reliability. These are argued to have strongly contributed to the severity of the disaster. A series of failures of organizational mechanisms occurred within the command structure of the crew from the top to the middle management. The fact that cruise ships carry large and diverse groups of people makes that their officers, staff and crew need a clear understanding of human responses in emergencies and an ability to deal with crowds.

The paper shows that the areas directly related to human behavior and crowd control might include the ability of giving clear and reassuring orders, dealing with passengers' special needs and keeping order, reducing or avoiding panic. In emergencies, the key personnel (who has responsibility for the safety of passengers) might lead people, assess concerns and provide a prompt response to critical events. The study suggests that the best viable solution for avoiding critical events is to train people towards safe practices, in order to ensure that human error is eliminated.

This collection of papers increases our understanding of the current and future role of skills and competences in the maritime logistics industry, deepening various analytical perspectives. The issue contains a valuable paper compilation, which can provide guidance on how to address today's human resource management challenges in the maritime and port environment. In this vein, the editors hope the special issue will inspire researchers, practitioners and policy makers to work together to deepen knowledge on this relevant industry and to improve its effectiveness conditions.

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